

Your Ref: S1M03A1Q
Our Ref : CS4/ASM21005793/P

25th May 2021

M/s AXA Insurance Pte. Ltd.

8 Shenton Way #24-01
AXA Tower
Singapore 068811
(Motor Claims Department)

TECHNICAL INVESTIGATION REPORT OF FIRE INCIDENT INVOLVING THE INSURED VEHICLE SMY 4982D ON 11th May 2021

1. We refer to your letter dated 14th May 2021 and the instructions therein.
2. Our analysis, comments and opinions with respect to the cause of fire to the insured vehicle SMY 4982D (herein referred to as “**Insured Vehicle**”) are set out below.

Inspection of the Insured Vehicle

3. The Insured Vehicle was physically inspected on 14th May 2021 at the premises of K. Kim Hin Auto Pte Ltd located at 160 Sin Ming Dr, #02-18/19/20/21, Singapore 575722
4. A static inspection was carried out to the Insured Vehicle where the following general information was recorded:-

Vehicle Registration No.	: SMY 4982D
Make / Model	: BMW 420i M SPORT CONVERTIBLE HID NAV
Chassis No	: WBA3V12020PX80718
Year of Registration	: SEP 2015
Mileage	: 109,023KM
5. The Insured Vehicle was noted to have sustained fire damage that was confined to its interior compartment at the front left door panel portion. The exterior body was observed to be unaffected by the fire.
6. The fire was confined to its front left door interior panel portion, the fire had resulted in the various components located in the surrounding to suffer from heat and smoke damages, this includes its left door panel that were also observed to sustain damages included electronic components & wirings. See photos 1 – 8 below.

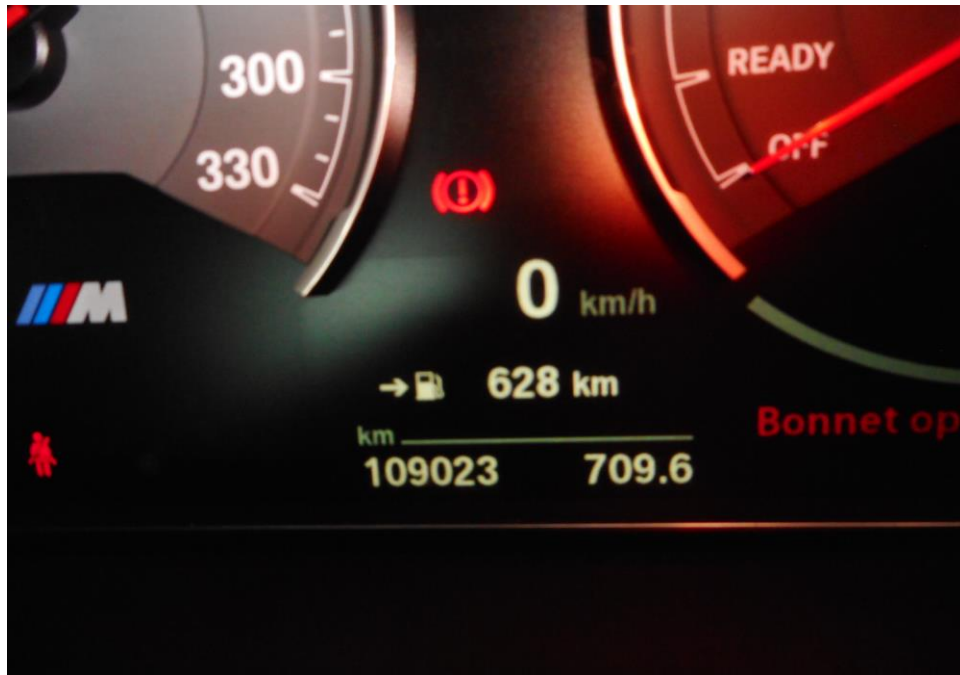


Photo 1 shows the mileage of the Insured Vehicle recorded at the time inspection at 109,023KM



Photo 2 shows the general view of the front portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its interior portion. Its exterior is observed to be unaffected by the fire.



Photo 3 shows the general view of the right portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its interior portion. Its exterior is observed to be unaffected by the fire.



Photo 4 shows the general view of the left portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its interior portion. Its exterior is observed to be unaffected by the fire.



Photo 5 shows the general view of the rear portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its interior portion. Its exterior is observed to be unaffected by the fire.



Photo 6 shows the general view of the engine portion of the Insured Vehicle at the time of our inspection. The fire damage to the Insured Vehicle was confined to its interior portion. Its engine compartment is observed to be unaffected by the fire.



Photo 7 shows the general view of the front left interior door panel of the Insured Vehicle at the time of our inspection. The door panel had suffered heat and smoke damages (circled) as a result of the fire.



Photo 8 shows the close up view of the front left interior door panel of the Insured Vehicle at the time of our inspection. The door panel had suffered heat and smoke damages (circled) as a result of the fire.

7. At the time of inspection of the Insured Vehicle, we found additionally fitted electronic and/or electrical component(s) in the Insured Vehicle. The additionally fitted components are the LED light strips and components at both the front door panels. There also appears to be modification(s) fitted on the Insured Vehicle which are observed to be aftermarket bonnet, aftermarket steering wheel, aftermarket sport rims, brake kits, aftermarket suspension system and aftermarket exhaust system on the Insured Vehicle. See photo 9 – 14 below.

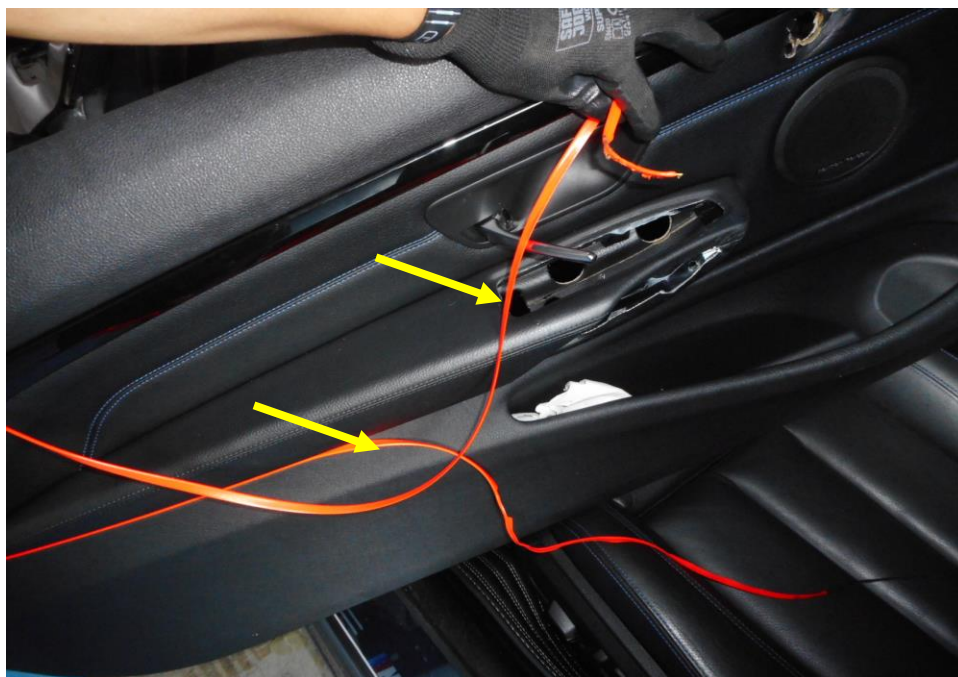


Photo 9 shows the front left interior door panel of the Insured Vehicle an additional fitted LED light strips (arrowed) on the Insured Vehicle, which was observed to be affected by the fire.



Photo 10 shows an aftermarket bonnet (circled) on the Insured Vehicle, which was observed to be unaffected by the fire.



Photo 11 shows an aftermarket steering wheel (circled) on the Insured Vehicle, which was observed to be unaffected by the fire.



Photo 12 shows an aftermarket rim (red arrow) and upgraded brake caplier and disc brake (yellow arrow) on the Insured Vehicle, which was observed to be unaffected by the fire.

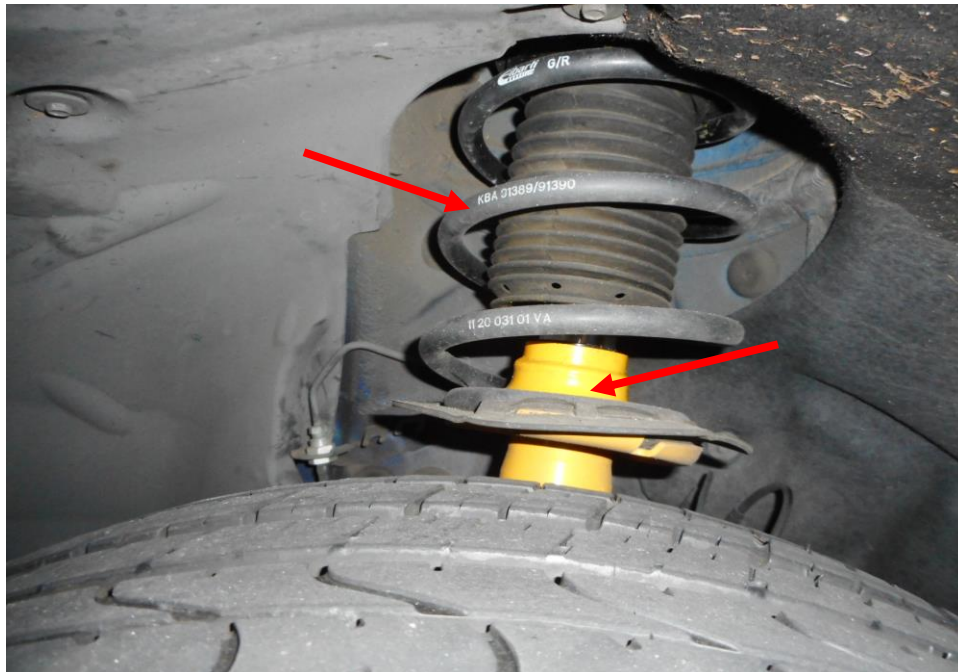


Photo 13 shows an aftermarket suspension (red arrow) on the Insured Vehicle, which was observed to be unaffected by the fire.



Photo 14 shows a set of aftermarket exhaust system (circled) on the Insured Vehicle, which was observed to be unaffected by the fire.

Investigation and Technical Analysis

8. Based on the circumstances for this particular case, the fire appears to have originated from the interior portion of the Insured Vehicle, somewhere in the front left door panel. This can be determined basing on the area where the extent of fire damage was most severe, the circumstances of the fires' origin at the material time of incident and also the burn marks and melting of material that were found at the front left door panel.
9. Upon closer observations, we have removed the front left door panel and found that the additionally fitted LED light strip wirings and its electrical components in the front left door panel were observed to be where the fire had started, we had found traces of greenish residue on the additional fitted wirings leading from the LED light strips to its electrical components. The wirings and electrical components were not original wirings fitted from manufacturer. The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring. The greenish residue is normally left behind from the oxidation as a result of chemical reaction involving the copper wires. This physical evidence would then appear to suggest that the cause of fire to the Insured Vehicle could have possibly been due to electrical in nature. See photo 15-20 below.



Photo 15 shows the general inside view of the front left door panel of the Insured Vehicle at the time of our inspection. Observed that the electrical components around then surrounding had sustain heat & smoke damage.

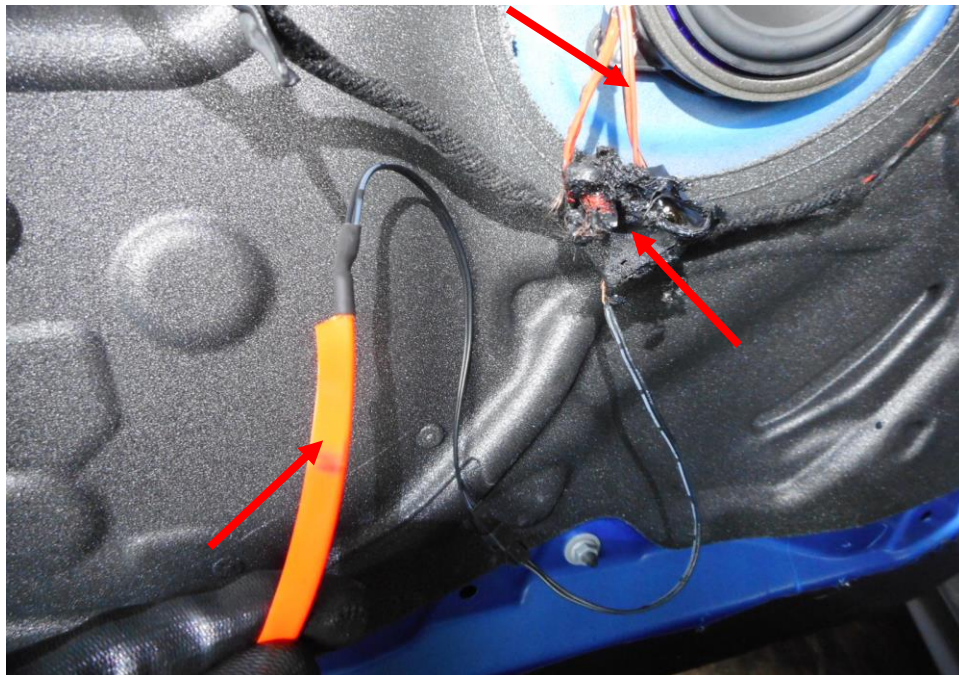


Photo 16 shows the general view of the wirings in the front left door panel of the Insured Vehicle at the time of our inspection. Observed that the fire had likely started from the additionally fitted LED light strips wiring harness connected to its electrical components (arrowed) as there was greenish residue on the surface. The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring. The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires. The fire damage had also melted the electrical components that it was connected to. These wirings and electrical components were not original wirings fitted from manufacturer.

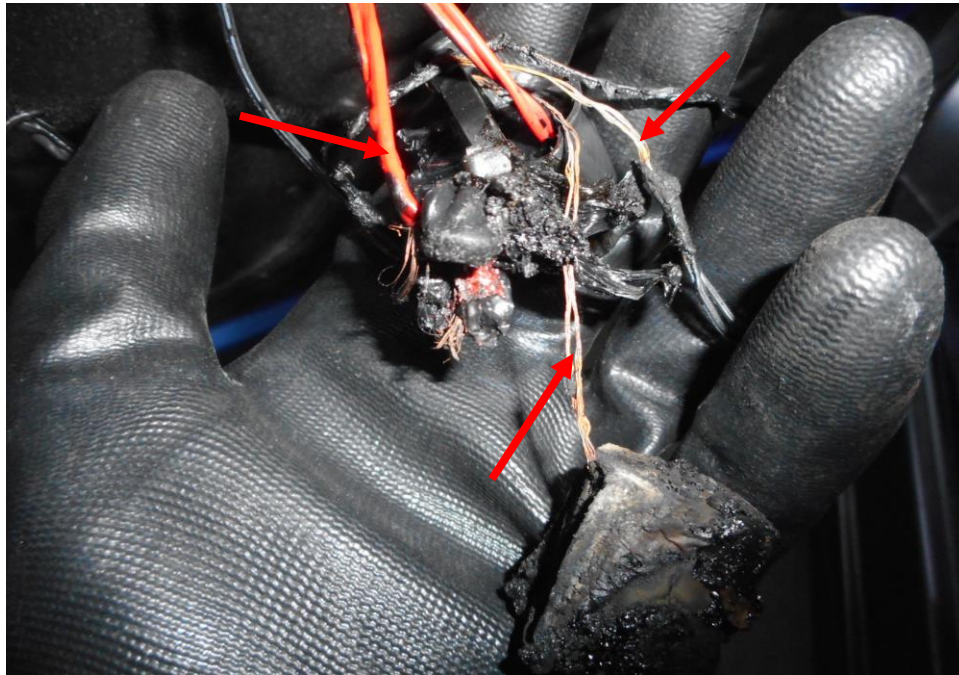


Photo 17 shows a close up view of the additionally fitted LED light strips wiring harness connected to its electrical components (arrowed) as there was greenish residue on the surface. The presence of greenish residue indicates internal heating of copper wires, a sign of an electrical short circuit occurring. The greenish residue is normally left behind from oxidation as a result of chemical reaction involving the copper wires. The fire damage had also melted the electrical components that it was connected to. This is likely where the fire had started from. These wirings and electrical components were not original wirings fitted from manufacturer.



Photo 18 shows the right side door panel general view of the additionally fitted LED light strips wiring harness installed on the door panel (arrowed). These components were not affected by the fire. These wirings and electrical components were not original wirings fitted from manufacturer.

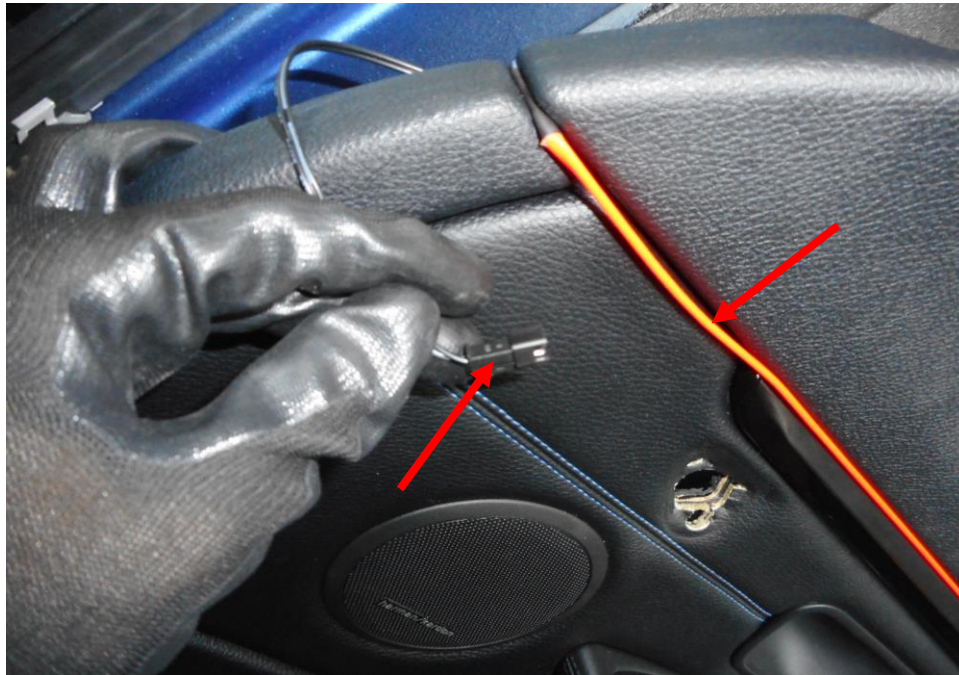


Photo 19 shows the right side door panel close up view of the additionally fitted LED light strips wiring harness with its electrical components installed on the door panel (arrowed). These components were not affected by the fire. These wirings and electrical components were not original wirings fitted from manufacturer.

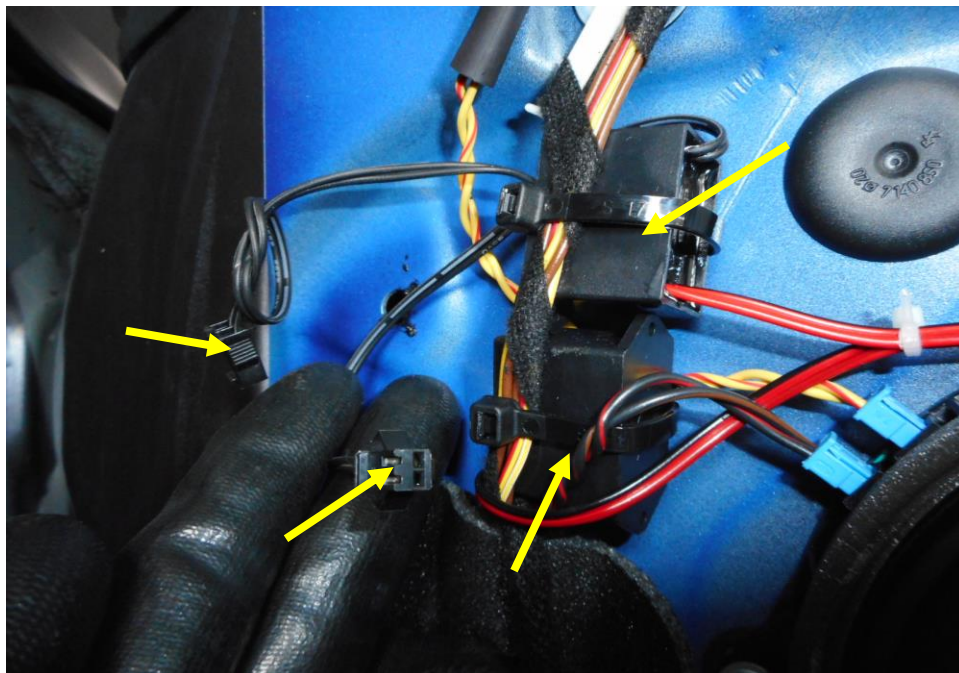


Photo 20 shows the right side door panel close up view of the additionally fitted LED light strips wiring harness with its electrical components installed on the door panel (arrowed). These components were not affected by the fire. These wirings and electrical components were not original wirings fitted from manufacturer.

10. We managed to speak to driver Mr Harrison Michael John on 21st May 2021 where we were able to gather further information pertaining to the incident as well as information pertaining to the history of the Insured Vehicle.
11. From the Singapore Accident Statement, which was made by Mr Harrison Michael John (herein referred to as **"Mr Harrison"**), we note that the fire to the Insured Vehicle had started at a time when he was driving the Insured Vehicle. Mr Harrison first spotted burnt smell and smog emitting from the cabin of the Insured Vehicle while he was driving.
12. According to Mr Harrison, on 19th May 2021 at 0630 hours he was driving the Insured Vehicle from his residence at Bedok South towards the gym located at Dempsey hill. In the midst of driving, he noticed burned smell in the cabin and he mentioned that he whine down the window to check if the smell was from the outside and also to air the cabin, he whine up the window, however the burnt smell is still there. Subsequently, he notice smoke emitting from the front left door panel of the Insured Vehicle. Mr Harrison spotted a nearby petrol station and quickly pulled into it and away from the petrol pump, switched off the engine & exited the Insured Vehicle to examine the source.
13. Mr Harrison informed us that in the midst of examination, he observed smoke and a small flame emitting out from the interior of the front left door panel, he quickly asked the petrol attendant for assistance to bring the fire extinguisher and a bucket of water to extinguish the fire, he always mentioned that a customer in the petrol station approached him to render assistance, they remove the front left door panel lining and managed to extinguish the fire by pouring water on the affected wirings and components that were on fire without the use of the fire extinguisher.
14. Mr Harrison mentioned that there was no SCDF activation as they managed to put out the fire at the material time. Subsequently, Mr Harrison contacted his friend by the name or Rendy which is also the car dealer that sold Insured Vehicle to him. Mr Harrison mentioned that he had contacted Rendy for assistance and Rendy who stays nearby had rush over to the scene within 30 minutes and arranged for a tow truck to have it towed to his workshop. Mr Harrison mentioned that he had left the scene shortly after Rendy had arrived as he had upcoming appointments to attend to. Rendy had arranged the Insured Vehicle be towed to his workshop nearby and his workshop had advised him to tow the Insured Vehicle to the insurance company's authorised workshop K. Kim Hin at Sin Ming Road. Mr Harrison proceeded down & made an accident report the following day.

15. Mr Harrison mentioned that he had not experienced any mechanical or electrical/electronic problems with the Insured Vehicle till the day of the incident. He also mentioned that there were neither warning lights displayed nor was there an abnormal rise in temperature throughout the period the Insured Vehicle and when driven, prior to the fire.
16. With regards to the history of the Insured Vehicle, we were able to gather from Mr Harrison that he is the Insured Driver and the Insured Vehicle was purchased pre-owned 2 months ago from his friend Rendy the Car dealer and the Insured Vehicle belongs to his wife Ms Harrsion Dorilyn Ciervo who is the registered owner of the Insured Vehicle. Mr Harrison informed us that he is the only driver of the Insured vehicle since the day the Insured Vehicle bought also as his wife is driving another Vehicle herself.
17. Pertaining to the maintenance aspect, Mr Harrison informed us that the Insured Vehicle haven't when from any periodical servicing or any LTA inspection as the car dealer had send the Insured Vehicle for servicing before handling the Insured Vehicle over to him .

Modification Supporting Photographs

18. Mr Harrison informed us that he had not done any modifications to the Insured Vehicle and he had bought the Insured Vehicle as it is. Mr Harrison had provided us with documents to support his claim that the modifications was on the Insured Vehicle was installed by the previous owner of Insured Vehicle before it was sold to him.
19. Mr Harrison had also informed us that the previous owner that retained his number plate SMS 66G, so Mr Harrison had to bid for a new plate SMY 4982D. The photographs had also showed the Insured Vehicle as per what we had observed during our physical inspection of the Insured Vehicle. Apart from the aforesaid, there was no further notable information that could be gathered from these photographs and the transfer of ownership details of the Insured Vehicle from LTA. See photo 21 - 33 below which were provided to us by Mr Harrison.



Photo 21 shows the general front view of the Insured Vehicle, which was observed to be number plated with the previous owner's plate number of SMS 66G. The aftermarket bonnet (arrowed) was also installed on the Insured Vehicle at the material time.



Photo 22 shows the general rear and right view of the Insured Vehicle, which was observed to be number plated with the previous owner's plate number of SMS 66G.



Photo 23 shows the general left view of the Insured Vehicle, which was observed to be number plated with the pervious owner's plate number of SMS 66G.



Photo 24 shows an aftermarket rim (red arrow) and upgraded brake caplier and disc brake (yellow arrow) on the Insured Vehicle at the material time.



Photo 25 shows an aftermarket exhaust system (circled) on the Insured Vehicle at the material time.

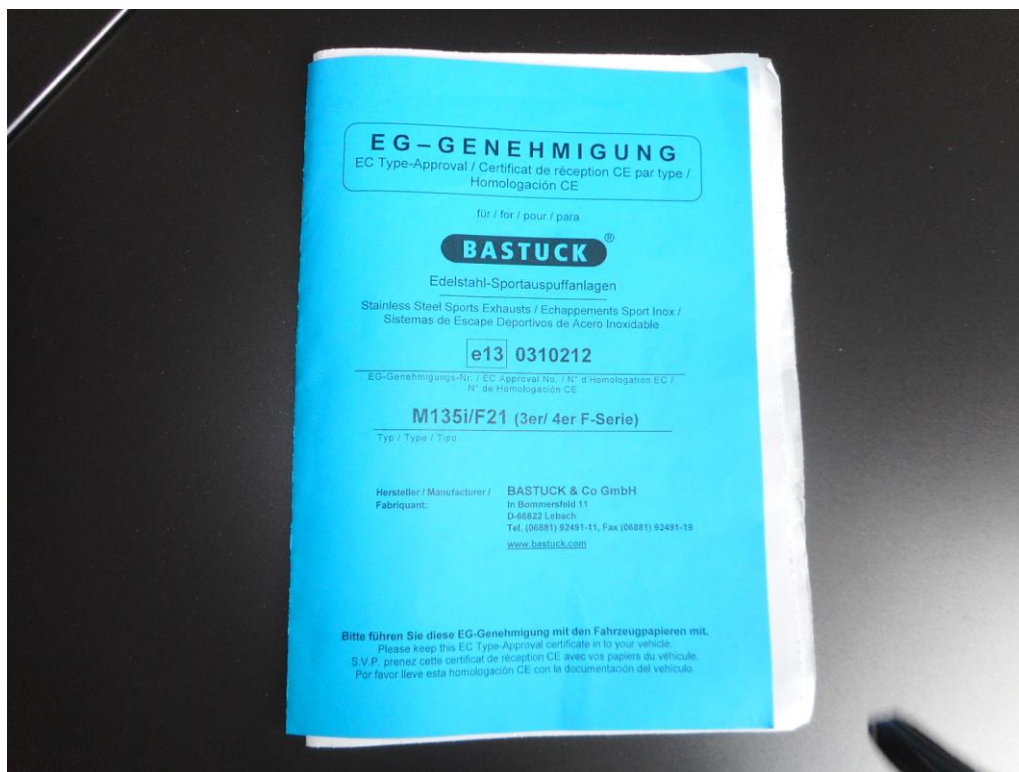


Photo 26 shows an aftermarket exhaust system certification booklet of the Insured Vehicle at the material time.

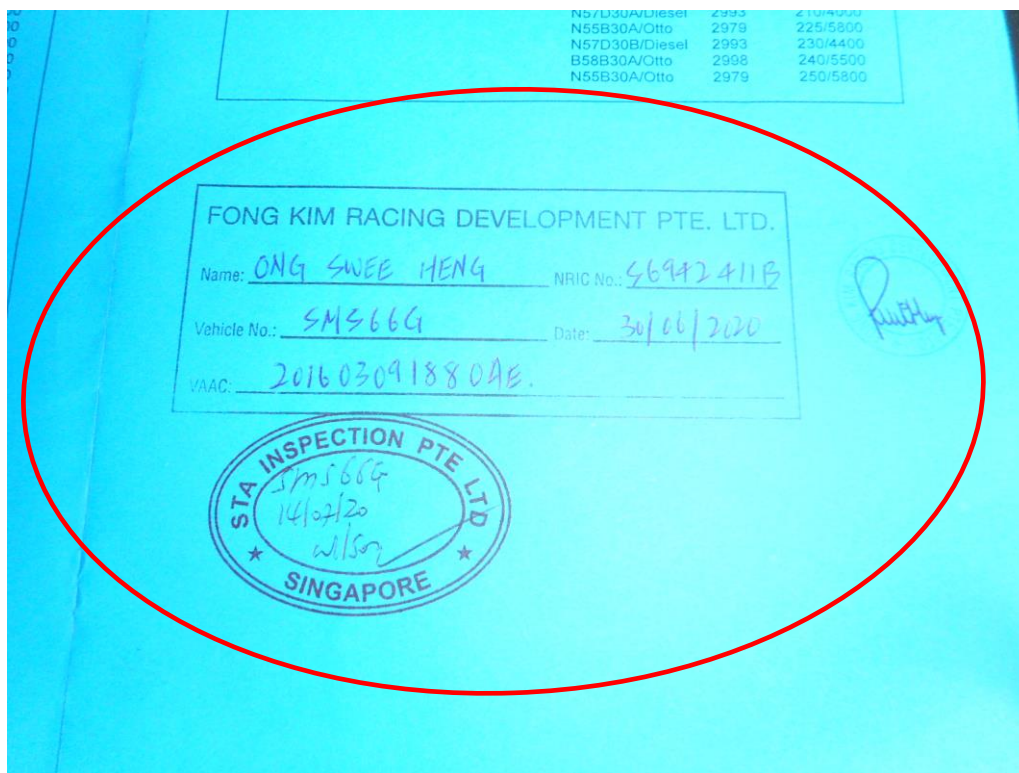


Photo 27 shows an aftermarket exhaust system certification booklet with the previous owner's number plate and the stamp of approval from LTA inspection centre (circled) on the Insured Vehicle at the material time.



Photo 28 shows additional LED light strips that was already fitted at the front left door panel (arrowed) of the Insured Vehicle at the material time.



Photo 29 shows an aftermarket steering wheel (circled) on the Insured Vehicle at the material time.

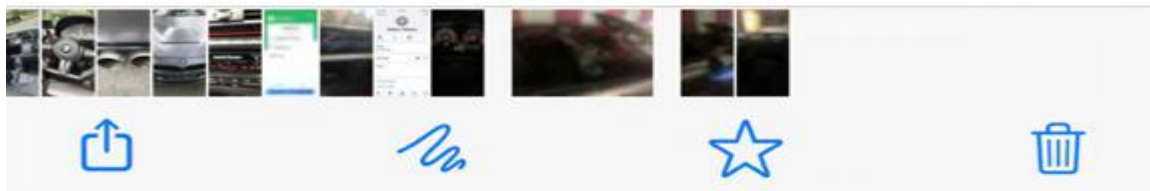
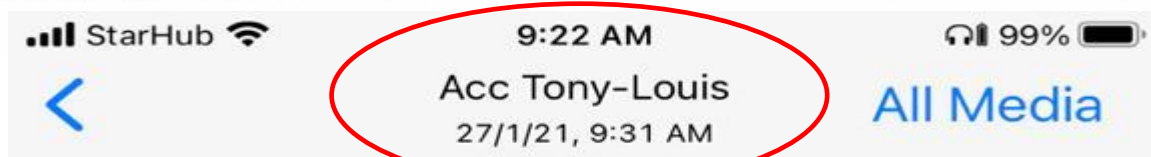


Photo 30 shows additional LED light strips at the front left door panel (yellow arrow) and the aftermarket steering wheel (red arrow) fitted on the Insured Vehicle. This photo is dated 27 January 2021 (circled) which is before the Insured Vehicle was purchase by Mr Harrison's wife.

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Transaction History Details

Asset Type Vehicle	Asset ID SMY4982D
Transaction Type 05.02 Confirm Pending Vehicle Transfer Appln (Self)	Log Date/Time 15 Mar 2021 / 13:38:45

Receipt No.: ITNET-00000-210315-002152 Business Transaction Reference No.: 20210315133845179527 Owner ID Type: Company Owner Country/Region: Singapore Next Owner ID Type: Singapore NRIC Next Owner Country/Region: Singapore Next Owner's Registered Block/House No.: 299 Next Owner's Registered Floor No.: 01 Next Owner's Registered Building Name: - Vehicle No.: SMY4982D Vehicle Type: 	Transaction Amount: \$25.00 Channel: Internet Owner Name: CHUA HENG MOTORS (PRIVATE) LIMITED Status: The vehicle has been transferred successfully Next Owner Name: HARRISON DORILYN CIERVO Next Owner's Registered Address Type: Private Residential (Condo Apt or House) / Shopping / Office Complexes Next Owner's Registered Street name: BEDOK SOUTH AVENUE 3 Next Owner's Registered Unit No.: 06 Next Owner's Registered Postal Code: 469298 Previous Vehicle No.: - Vehicle Scheme:
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P10 - Passenger Motor Car	Normal
Vehicle Make: B.M.W.	Vehicle Model: 420I M SPORT CONVERTIBLE HID NAV
Vehicle Attachment 1: No Attachment	Vehicle Attachment 2: -
Vehicle Attachment 3: -	Chassis No. / Trailer Chassis No.: WBA3V12020PX80718
Engine No./Motor No.: A9000906N20B20B / -	Engine Capacity(cc)/Power Rating(kW): 1997 / -
Passenger Capacity: 3	Propellant: Petrol
Primary Color:	Secondary Color:

1 of 3

Photo 31 shows the LTA transfer details of the Insured Vehicle to Mr Harrison's wife. Details included are new number plate, car dealer details and next owner name.

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Engine No./Motor No.:
A9000906N20B20B / -

Passenger Capacity:
3

Primary Color:
Blue

Maximum Laden Weight (Kg):
2145

Effective Ownership Date/Time:
15 Mar 2021 13:38:45 

First Registration Date:
30 Sep 2015

Year of Manufacture:
2014

Financing Expiry Date:
-

COE No.:
2015100107000075M

COE Expiry Date:
29 Sep 2025

ActualPQP Paid / QP Paid:
61,010.00

Minimum PARF Benefit:
26,313.00

Additional Registration Fee Rate:

Engine Capacity(cc)/Power Rating(kW):
1997 / -

Propellant:
Petrol

Secondary Color:
-

Unladen Weight (Kg):
1675

No. of Transfer:
1 

Original Registration Date:
30 Sep 2015

PARF Eligibility Expiry Date:
29 Sep 2025

Pending Expiry Date:
20 Mar 2021

COE Bid Category:
E - Open Category

Open Market Value:
43,305.00

Actual ARF paid:
\$52,627.00

Quota Premium / Prevailing Quota
Premium:
\$62,101.00 / -

Transfer coupled with:

First \$20,000.00 (100%), next \$23,305.00
(140%)

Information displayed is correct as at the log date and time.

Printed on 15 Mar 2021 13:42:44

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Photo 32 shows the LTA transfer details of the Insured Vehicle to Mr Harrison's wife. Details included are number of vehicle transfer and effective ownership date of the new owner to the Insured Vehicle which is Mr Harrison's wife.

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Land Transport Authority
10 Sin Ming Drive
Singapore 575701

GST Registration No. : M4-0006529-2

Print Date/Time : 15 Mar 2021 / 13:40:35

Receipt Date/Time : 15 Mar 2021 / 13:40:02

Tax Invoice/Receipt

Receipt No. : ITNET-00000-210315-002152

Previous Receipt No. :

S/N	Item Description/ Business Transaction Reference No.	Amount Before GST (S\$)	GST Amount (S\$)	Amount After GST (S\$)
1	Transfer of Veh - SMY4982D Transfer Fee 20210315133845179527	25.00	0.00	25.00
Sub-Total		25.00	0.00	25.00
Total Before Rounding		25.00	0.00	25.00
Rounding Difference				0.00
Total Amount Payable				25.00
Paid By				
456598XXXXX5071		eNETS Credit Card		25.00
Total				25.00
Cash Change				0.00
Tendered Amount				25.00
Excess Refundable Amount				0.00

THANK YOU AND HAVE A NICE DAY!

Please ensure that all payments to the Authority are good and promptly settled by the payment service provider / financial institution. Otherwise, the transaction and receipt is considered void and late fee may apply.

Photo 33 shows the receipt of the LTA transfer details of the Insured Vehicle to Mr Harrison's wife. Details included are vehicle number and effective ownership date of the new owner to the Insured Vehicle which is Mr Harrison's wife.

Incident Scene Photographs

20. During the course of our investigations, we were able to obtain coloured photographs showing the Insured Vehicle at the incident location before, during and after the fire was extinguished by Mr Harrison. These were provided to us by Mr Harrison.
21. Our examination of these photographs revealed that the fire had started from the front left interior door panel of the Insured Vehicle. The photographs had also showed the Insured Vehicle on fire and similar extent of damage and burn pattern to the Insured Vehicle as per what we had observed during our physical inspection of the Insured Vehicle. Apart from the aforesaid, there was no further notable information that could be gathered from these photographs. See photos 34 - 37 below which were provided to us by Mr Harrison.



Photo 34 shows the petrol kiosk that Mr Harrison had drove in and stopped the Insured Vehicle at. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Harrison, location when the fire broke out.



Photo 35 shows the petrol kiosk that Mr Harrison had drove in and stopped the Insured Vehicle at. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Harrison, location when the fire broke out.



Photo 36 shows the front left door panel, where the fire had started on Insured Vehicle. Observed is smoke emitting out of the front left door panel (circled). In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Harrison, location when the fire broke out.



Photo 37 shows after the front left door panel was removed and the fire had been put on Insured Vehicle. In general, the information that could be gathered from this photograph had corresponded to the events that were related to us by Mr Harrison, location when the fire broke out.

22. Given the circumstances of the incident as reported, the possibility of the cause of fire to the Insured Vehicle being due to engine overheating would seem unlikely as Mr Harrison had mentioned to us there were no indications of abnormally high temperatures when he was driving the Insured Vehicle on the day of the incident. Moreover, there was no damaged of fire nature in the engine compartment.
23. The possibility of the fire being due to external factors (foreign material(s) stuck on hot surfaces, arson and sabotage amongst others) would also seem unlikely as the fire occurred as Mr Harrison was driving the Insured Vehicle. The location where the Insured Vehicle caught fire was also observed to be not at a secluded location.

24. The possibility of the fire being due to electrical in nature would then seem more likely given that engine overheating and external factors would both seem unlikely. The fire being due to electrical nature is also supported by the condition of the wirings that were found leading from the additionally LED light strips and its electrical components that was fitted on the front left door panel of the Insured Vehicle. There wirings and electrical components were not original wirings fitted from manufacturer on the Insured Vehicle, which was earlier discussed in paragraph 9 above.
25. Our checks with both local and international bodies and associations had also revealed that at the time of writing this report, there is no manufacturer recall of similar make and model vehicle as the Insured Vehicle that may possibly be related to fire being originated from the exterior of the Insured Vehicle. See search result from LTA below.

Vehicle Recall Details

* ONLY INFORMATION ON VEHICLE RECALLS SUBMITTED FROM 9 APRIL 2007 IS AVAILABLE

Owner ID Type Singapore NRIC	Owner ID 380B ←
Vehicle No. SMY4982D ←	Make/Model B.M.W./ 420I M SPORT CONVERTIBLE HID NAV
Engine No.: A9000906N20B20B	
Chassis No.: WBA3V12020PX80718	
Recall Details: No Recall Detail records ←	

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Recall details. Shows the vehicle recall results retrieved from LTA's website. There was no recall on the Insured Vehicle at the time to the fire incident.

Conclusion

26. Having investigated and technically analysed the damages of burnt nature to the Insured Vehicle, we are of the view that the cause of fire to the Insured Vehicle was of electrical nature. For this particular case, the fire had originated from the wirings of the additionally fitted LED light strips to its electrical components which are installed at the front left interior door panel, both are non-original manufacturer components.
27. We did not find any evidence which had suggested that the cause of fire to the Insured Vehicle was due to poor maintenance and/or recurring electrical problem.
28. Upon investigation, the aftermarket steering wheel, aftermarket sport rims, brake kits, aftermarket suspension system and aftermarket exhaust system on the Insured Vehicle did not have the capacity to cause a fire for this particular incident. However, for this particular case the additionally installed LED light strip was found to be the cause of fire in the Insured Vehicle.
29. Our investigations had also revealed that at the time of writing this report, there is no manufacturer recall to similar make and model vehicle as the Insured Vehicle that may possibly be related to this incident.
30. In our investigations, we have noted that the all the modifications mentioned and install on the Insured Vehicle was already installed before Mr Harrison's wife bought it over.



Sherwin Beh

Technical Investigator



Ang Bryan Tani

AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA

Senior Technical Investigator

Technical Investigation & Reconstructionist (SAE-A)

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